

REMARKS/ARGUMENTS

In response to the above-identified Office Action, claims 1, 9, and 17 have been canceled, and claims 2, 8, 10-16, 18, 21, and 22 have been amended. Claims 2-8, 10-16, and 18-23 remain pending in the present invention.

For the reasons set forth more fully below, Applicant respectfully submits that the present claims are allowable. Consequently, reconsideration, allowance and passage to issue of the present application are respectfully requested.

The Examiner objected to the specification for use of the phrase "are described" in the abstract. Applicant has amended the specification to remove usage of that phrase. Accordingly, Applicant respectfully requests withdrawal of the objection to the specification.

With respect to the Examiner's objections to the claims, Applicant has amended the claims to address these objections. Applicant respectfully submits that no new matter has been added nor has the scope of the claims been changed by these amendments.

Cited Art Rejections

The Examiner rejected claims 1-7, 9-10, and 12-23 under 35 U.S.C. 102(b) as being anticipated by Ishii and rejected claims 8 and 11 under 35 U.S.C. 103(a) as obvious over Ishii in view of Chen. Applicant respectfully disagrees with the rejections.

Through the present invention, jitter in a PLL is successfully reduced by examination of the parameters directly related to PLL performance without knowledge of absolutes in frequency from the reference clock or in operating frequency. Thus, a flexible and efficient approach to accommodating variations in the frequency of the incoming signal for a PLL of a high speed serial link is achieved.

The present invention includes examining at least one parameter related to performance of a voltage controlled oscillator (VCO) in the PLL, and controlling adjustment of a supply voltage to the VCO based on the results. A regulator control circuit performs this examination and controls the resultant supply voltage to the PLL. The at least one parameter includes a VCO control voltage that is compared to predetermined voltage levels, as recited in varying form in original claims 2, 10, and 18. Applicant has amended original dependent claims 2, 10, and 18 to be of independent form, canceling their original base claim, independent claims 1, 9, and 17. Applicant has also amended the dependent claims as needed to maintain dependency on a pending claim. Applicant respectfully submits that no new matter has been added nor has the scope the claims been changed by the amendments. Applicant further respectfully submits that the cited art fails to teach, show, or suggest the recited invention.

The cited Ishii reference describes a PLL frequency synthesizer for driving a charge pump using an output from a phase comparator for comparing a phase of a frequency of a generation voltage of a VCO with a phase of a reference frequency, and driving the VCO using an output from the charge pump, thereby outputting a signal having a set desired frequency. (See paragraph 0002.) Ishii further describes the monitoring of an output voltage and output current of a charge pump in achieving the output signal. (E.g., see paragraphs 9 and 11.) In the rejection, the Examiner contends that Ishii, in paragraph 45, teaches that the VCO control voltage is monitored before the regulator control circuit sends the result to the regulator for power supply level changes. Applicant fails to see any such teaching in paragraph 45, as asserted by the Examiner.

In fact, Applicant respectfully submits that Ishii instead teaches in paragraph 45 that "the control voltage of the VCO 6 rarely changes". Applicant fails to see how a parameter that is

described as 'rarely changing' could or would teach or suggest a parameter that would be monitored for changes to adjust other level changes. Thus, Applicant respectfully submits that Ishii fails to teach or suggest that a VCO control voltage is monitored.

Without teaching or suggesting that a VCO control voltage is monitored, there is nothing to teach or suggest that the examining of at least one parameter related to performance of the VCO includes a VCO control voltage, as recited in independent claims 2, 10, and 18. Further, there is nothing to teach or suggest controlling adjustments of a supply voltage to the VCO based on the examining, as also recited in claims 2, 10, and 18. Accordingly, Applicant respectfully submits that claims 2, 10, and 18 are allowable over the cited art. Applicant further respectfully submits that dependent claims 3-8, 11-16, and 19-23 include the features of one of the independent claims that are believed allowable over the cited art while adding further features, and therefore, these claims are also respectfully submitted as allowable for at least those reasons associated with claims 2, 10, or 18. In addition, even the inclusion of the cited art of Chen fails to overcome the deficiencies of Ishii.

In view of the foregoing, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. 102(b) and 103(a).

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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